Application/Control No. Applicant(s)/Patent under Index of Claims Reexamination 10/772,371 AOKI ET AL. Examiner Art Unit Hoan H. Tran 2852 (Through numeral) Rejected Non-Elected **Appeal** N Cancelled Α 0 Restricted Interference Objected **Allowed** 

| Cla                    | aim      | Date     |                       |              |  |              |          |           |          |          | Cla            | Date     |          |          |          |          |               |         | ſ        | Cla             | aim        | Date     |          |                 |          |          |          |          |          |           |           |          |
|------------------------|----------|----------|-----------------------|--------------|--|--------------|----------|-----------|----------|----------|----------------|----------|----------|----------|----------|----------|---------------|---------|----------|-----------------|------------|----------|----------|-----------------|----------|----------|----------|----------|----------|-----------|-----------|----------|
| <del></del>            | I        |          |                       |              |  |              | $\dashv$ | <u> </u>  | Date     |          |                |          |          |          |          | ł        |               | - Date  |          |                 |            |          |          |                 |          |          |          |          |          |           |           |          |
| <u></u>                | Original | 12/27/05 |                       |              |  |              |          |           |          |          | <del>_</del> _ | Original |          |          |          |          |               | 1       |          |                 |            | <u>_</u> | Original |                 |          |          |          |          |          |           |           | ı        |
| Final                  | igi      | 727      |                       |              | ١  |              |          |           | - 1      |          | Final          | ij       |          |          |          |          |               | 1       | l        |                 | ı          | Final    | ıġi      |                 |          |          |          |          |          |           |           | ı        |
| ן "                    | ō        | 12       |                       | - 1          |  |              |          |           |          | ı        | "              | ō        |          | ŀ        | -        |          |               |         |          |                 |            | _        | ō        |                 |          |          |          |          |          |           | - 1       | ı        |
| $\vdash$               | 1        | 1        | $\vdash$              | $\dashv$     | $\dashv$   |              |          | Н         | $\dashv$ | $\dashv$ |                | 51       | Н        | $\dashv$ | $\dashv$ | +        | +             | +       | ╁        | Н               | ŀ          | -        | 101      | Н               |          |          | $\vdash$ | _        | _        | $\dashv$  | ⇥         | _        |
|                        | 2        | •        | $\vdash$              | +            | $\dashv$   |              | -        |           | -        |          |                | 52       | Н        | $\dashv$ | $\dashv$ | +        |               |         | ╁╴       | Н               | ŀ          |          | 102      | -               | $\vdash$ | _        | H        |          | _        | $\vdash$  | $\dashv$  | _        |
| <del></del>            | 8        |          | $\vdash$              | $\dashv$     | ┥  | _            | -        | -         | -+-      | -        |                | 53       | Н        | $\dashv$ | -        |          |               |         | ┼        | $\vdash$        | ŀ          |          | 103      |                 | $\dashv$ |          | H        |          |          | $\vdash$  | $\dashv$  | ·        |
|                        | _        | -1       |                       | +            | $\dashv$   | _            | $\vdash$ | Н         | $\dashv$ | -        |                |          | Н        |          | -        | +        | -             | +       | ⊬        | $\vdash$        | ŀ          |          |          |                 | -        |          | H        | Н        | $\vdash$ | -         | $\dashv$  | _        |
|                        | 4        | 1        | $\vdash$              | +            | -  |              | -        | $\vdash$  | $\dashv$ | 4        | $\vdash$       | 54       | $\vdash$ | $\vdash$ | +        | +        | +             | +-      | ├        | Н               | ŀ          |          | 104      |                 | $\dashv$ |          | -        |          |          | -         | $\dashv$  |          |
|                        | 5        |          | $\vdash \vdash$       | +            | -  |              | <u> </u> |           | $\dashv$ | 4        | -              | 55       | $\vdash$ |          | -        | _        |               | -       | ├-       | $\vdash$        | ŀ          |          | 105      | _               |          |          | Ш        | Ш        | _        | $\vdash$  | $\dashv$  |          |
| ├                      | 6        | 0 "      |                       | -            | ᅱ  | _            | _        | $\vdash$  | -        | -        | <u> </u>       | 56       | Н        | $\vdash$ |          | +        | -             | +       | $\vdash$ | H               | }          |          | 106      | -               |          |          | _        |          | _        |           | $\dashv$  |          |
| ⊢—                     | 7        |          | $\vdash$              | +            | $\dashv$   | _            |          | Н         | $\dashv$ | 4        |                | 57       | Н        |          | -        | -        |               | -       | ┼-       |                 | }          |          | 107      |                 |          | _        | Н        | Н        |          | $\vdash$  | $\dashv$  | _        |
|                        | 8        | 1        | $\vdash$              | +            |  |              |          | $\vdash$  | -        | 4        |                | 58       | $\vdash$ |          | -+       | +        | +             | +       | ⊢        | Н               | - }        |          | 108      | Н               | $\dashv$ |          | Щ        | _        | _        | -         |           | _        |
|                        | 9        | Ó        |                       | 4            |  |              |          | $\sqcup$  | -        | 4        | <u> </u>       | 59       |          | $\dashv$ | $\dashv$ | 4        | +             | +-      | ┡        | Н               | - }        |          | 109      |                 | $\Box$   |          |          | Щ        |          | _         | $\dashv$  |          |
|                        | 10       | 1        | $\vdash$              | 4            | 4  | _            | _        | $\dashv$  | -        | 4        | -              | 60       | Н        | $\dashv$ |          | 4        | - -           |         | <u> </u> |                 | ļ          | _        | 110      |                 | _        |          |          | $\perp$  |          |           | _         |          |
|                        | 11       | =        | $\vdash$              | 4            | _  | _            | _        | ${oxdot}$ | $\dashv$ | 4        |                | 61       | Ш        | $\sqcup$ | $\dashv$ | +        | +             | +-      | ╀-       | Н               | ļ          |          | 111      | $\vdash \vdash$ |          |          | Ш        | Щ        |          | $\square$ | _         |          |
| <u> </u>               | 12       | =        | $\vdash \vdash$       | +            | _  | _            | <u></u>  |           | $\perp$  | 4        | <u> </u>       | 62       | Ш        | $\Box$   | $\dashv$ | $\perp$  | +             | +-      | 1        | $\sqcup$        | J.         |          | 112      |                 |          |          | Ш        | Ш        |          |           | _         |          |
| L                      | 13       | 0        | $\vdash$              | 4            | _  | _            | Ш        | Щ         | _        | 4        | <u> </u>       | 63       | $\sqcup$ | _        | _        | $\perp$  | $\bot$        | $\perp$ | $\vdash$ | Ш               | ļ          |          | 113      |                 | $\sqcup$ | _        | Ш        | Ш        |          | $\Box$    | _         |          |
| Ш                      | 14       | 0        | $\sqcup$              | 4            | _  | ļ            | Щ        | Ш         | $\perp$  | _        | <u> </u>       | 64       | _        |          | _        | _        | $\perp$       | $\perp$ | _        | Ш               | Ţ          |          | 114      |                 |          |          | Ш        |          |          |           |           |          |
| $\sqsubseteq$          | 15       | O,       | $\sqcup$              | $\downarrow$ | _  | _            | Щ        | Ш         | _ _      | _        |                | 65       |          | _        | _        | 1        | $\perp$       | $\perp$ | $\perp$  | Ш               | J          |          | 115      |                 | $\sqcup$ |          | Ш        | Ш        |          |           | $\dashv$  |          |
|                        | 16       | 1        | $\perp$               | $\perp$      | _  |              | Ш        | Ш         | $\perp$  | 4        |                | 66       |          |          | $\perp$  | 4        | $\perp$       | 1_      | 1_       | Ш               | L          |          | 116      |                 | Щ        |          | Ш        |          |          |           | $\dashv$  |          |
|                        | 17       | 0        | $\sqcup \!\!\! \perp$ | 4            | $ \bot \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! $ |              |          | Ш         |          | _        | L              | 67       | Ш        | $\Box$   | $\perp$  | $\perp$  | $\perp$       | $\perp$ | _        | Ш               | L          |          | 117      |                 |          |          |          |          |          |           |           |          |
|                        | 18       | 0        |                       |              |  |              |          |           |          | ╛        |                | 68       |          |          |          | $\perp$  |               |         | L        | Ш               | L          |          | 118      |                 |          |          |          |          |          |           |           |          |
|                        | 19       | 1        |                       |              |  |              |          |           | L        | ╛        | L              | 69       |          |          |          |          |               |         |          |                 |            |          | 119      |                 |          |          |          |          |          |           |           |          |
|                        | 20       | 0        |                       |              |  |              |          |           |          |          |                | 70       |          |          |          |          |               |         |          |                 | [          |          | 120      |                 |          |          |          |          |          |           | $\Box$    |          |
|                        | 21       | 0        | -                     |              |  |              |          |           |          |          |                | 71       |          |          |          |          |               |         |          |                 | ſ          |          | 121      |                 |          |          |          |          |          |           | $\neg$    |          |
|                        | 22       | 0        |                       | Т            |  |              |          |           |          | Β.       |                | 72       |          |          |          | T        |               | Т       |          | П               | ſ          |          | 122      |                 |          |          |          |          |          | $\neg$    | $\neg$    |          |
|                        | 23       | 0        |                       | Т            |  |              |          |           |          |          |                | 73       |          |          |          |          | Т             |         |          | П               | ſ          |          | 123      |                 |          |          |          |          |          |           | П         |          |
|                        | 24       | 0        |                       | Т            | П  |              |          |           |          | 7        |                | 74       |          |          | $\Box$   | Т        | $\neg \vdash$ |         | Г        | П               | ſ          |          | 124      |                 |          |          |          |          |          |           | П         |          |
|                        | 25       |          |                       |              | T  |              |          |           |          | ٦        |                | 75       |          |          |          | Т        |               |         |          | П               | Γ          |          | 125      |                 |          |          |          |          |          |           | $\neg$    |          |
|                        | 26       | 0        |                       |              | П  | T            |          |           |          | ٦        |                | 76       |          |          |          | $\neg$   |               |         |          | П               | ſ          |          | 126      |                 |          |          |          |          |          | $\neg$    | $\neg$    | $\neg$   |
|                        | 27       | 0        |                       | T            | T  |              |          |           | $\neg$   | 7        |                | 77       |          |          |          | T        |               | 1       |          | П               | Ī          |          | 127      |                 |          |          |          |          |          |           | $\exists$ | $\neg$   |
|                        | 28       |          |                       | T            | $\neg$   |              |          |           |          |          |                | 78       | $\Box$   | T        |          | T        |               | T       |          | П               | Ī          |          | 128      |                 |          |          |          |          |          |           | ヿ         |          |
|                        | 29       | 0        |                       | $\neg$       | ヿ  | $\neg$       |          |           | $\neg$   | 7        |                | 79       |          | 一        |          |          |               | $\top$  |          |                 |            |          | 129      |                 |          |          |          |          |          | $\neg$    | $\neg$    | $\neg$   |
|                        |          | 0        |                       | $\top$       | $\neg$   | $\neg$       |          |           |          | 1        |                | 80       |          | T        | T        | 十        |               | $\top$  | T        |                 | ı          |          | 130      |                 |          | $\neg$   |          |          |          |           | 寸         | $\neg$   |
|                        | 31       | 0        |                       | +            | 7  | $\neg$       |          |           | $\neg$   | 1        |                | 81       |          | $\dashv$ | 十        | $\top$   | 7             | 1       | T        | П               | ı          | $\neg$   | 131      | $\dashv$        | $\dashv$ | 一        |          |          |          | 寸         | 一         | $\dashv$ |
|                        | 32       | 1        |                       | $\top$       | 7  | 一            | $\neg$   | $\neg$    | 一        | 7        |                | 82       | $\dashv$ | 一        | 十        | $\dashv$ | 十             | 十       | Т        | Н               | ŀ          |          | 132      | $\dashv$        | $\dashv$ | $\neg$   |          |          |          | 十         | $\dashv$  | $\dashv$ |
| $\vdash$               | 33       | Ť        | $\dashv$              | $\top$       | 7  | $\dashv$     |          | $\dashv$  | $\neg$   | $\dashv$ |                | 83       |          | $\dashv$ | 十        | +        | $\top$        | T       | $\vdash$ | Н               | h          |          | 133      | $\dashv$        | $\dashv$ |          | $\dashv$ |          |          | 一         | $\dashv$  | $\dashv$ |
|                        | 34       | Ì        | $\dashv$              | +            | 7  | $\dashv$     | $\neg$   | $\neg$    | 一十       | 7        |                | 84       | $\dashv$ | -        | $\dashv$ | +        | +             | +-      |          | $\vdash$        | ŀ          |          | 134      | ᅱ               | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ |          | $\dashv$  | $\dashv$  | $\dashv$ |
|                        | 35       | Ť        | $\neg +$              | $\top$       | $\dashv$   | $\dashv$     |          |           | 十        | 7        |                | 85       | $\neg$   | 7        | 十        | $\top$   | +             | T       | T        | Н               | l          |          | 135      | $\neg$          | $\neg$   | _        | -        |          |          |           | -+        | $\dashv$ |
| $\vdash$               | 36       | Ì        | _                     | 十            | 7  | $\dashv$     |          |           | 十        | 7        |                | 86       | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$      | +       | $\vdash$ | $\vdash$        | H          |          | 136      | $\dashv$        | $\neg$   | -        |          |          |          | $\dashv$  | $\dashv$  | $\dashv$ |
| $\vdash$               | 37       | i        | -                     | +            | $\dashv$   | <del> </del> | $\dashv$ | $\dashv$  | $\dashv$ | $\dashv$ | -              | 87       | $\dashv$ | +        | 十        | +        | +             | +       | $\vdash$ | Н               | -          |          | 137      |                 |          |          | $\dashv$ | $\dashv$ |          | $\dashv$  | +         | $\dashv$ |
|                        | 38       | Ť        | $\dashv$              | +            | $\dashv$   | $\dashv$     |          | +         | $\dashv$ | $\dashv$ |                | 88       | $\dashv$ | $\dashv$ | $\dashv$ | +        | +             | +       | $\vdash$ | Н               | ŀ          |          | 138      | $\dashv$        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | +         | $\dashv$  | $\dashv$ |
| $\vdash \vdash \vdash$ | 39       |          | $\dashv$              | +            | $\dashv$   | $\dashv$     | $\dashv$ | $\dashv$  | +        | $\dashv$ | <b>-</b>       | 89       | +        | $\dashv$ | +        | +        | +             | +       | $\vdash$ | H               | ŀ          |          | 139      | $\dashv$        | $\dashv$ | _        | -        | -        | -        | +         | $\dashv$  | -        |
|                        | 40       | $\neg$   | -                     | ┰            | +  |              | -        | $\dashv$  | +        | $\dashv$ | $\vdash$       | 90       | $\dashv$ | $\dashv$ | 十        | +        | +             | +       | $\vdash$ | Н               | ŀ          |          | 140      | $\dashv$        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$  | $\dashv$  | $\dashv$ |
|                        | 41       |          | +                     | +            | +  | $\dashv$     | $\dashv$ | $\dashv$  | +        | $\dashv$ | $\vdash$       | 91       | $\dashv$ | $\dashv$ | +        | +        | +             | +       | Н        | H               | ŀ          |          | 141      |                 | -+       | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$  | +         | $\dashv$ |
| $\vdash$               | 42       |          | +                     | +            | +  | $\dashv$     | $\dashv$ | $\dashv$  | +        | $\dashv$ | $\vdash$       | 92       | $\dashv$ | $\dashv$ | +        | +        | +             | +       | $\vdash$ | Н               | ŀ          |          | 142      | $\dashv$        | $\dashv$ | $\dashv$ | $\dashv$ | -        | -        | $\dashv$  | $\dashv$  | $\dashv$ |
|                        | 43       |          | -+                    | +            | +  | $\dashv$     | $\dashv$ | $\dashv$  | $\dashv$ | $\dashv$ | -              | 93       | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | +             | +       | $\vdash$ | $\vdash$        | H          |          | 143      | $\dashv$        | +        |          | -        |          | -        | $\dashv$  | $\dashv$  | $\dashv$ |
|                        | 44       | -        |                       | +            | +  | $\dashv$     | $\dashv$ | $\dashv$  | +        | $\dashv$ | $\vdash$       | 94       | $\dashv$ | $\dashv$ | +        | +        | +             | +       | $\vdash$ | Н               | H          |          | 144      | $\dashv$        | -        | $\dashv$ |          | -        |          | $\dashv$  | $\dashv$  | $\dashv$ |
|                        | 45       | $\dashv$ | $\dashv$              | +            | +  | $\dashv$     |          | $\dashv$  | +        | $\dashv$ |                | 95       | $\dashv$ | $\dashv$ | +        | +        | +             | +-      | $\vdash$ | $\dashv$        | ٠ <u> </u> |          | 145      | $\dashv$        | $\dashv$ |          |          |          |          | $\dashv$  | $\dashv$  | $\dashv$ |
| $\vdash$               | 46       | $\dashv$ | +                     | +            | +  |              |          |           | +        | $\dashv$ | $\vdash$       |          | +        | $\dashv$ | +        | - -      | +             | +       | Ι        | H               | -          |          | 145      |                 | -+       | -        | -        |          | -        | +         | $\dashv$  | $\dashv$ |
|                        | 46       | -        | +                     | +            | +  | $\dashv$     | $\dashv$ | $\dashv$  | +        | $\dashv$ | $\vdash$       | 96       |          | $\dashv$ | $\dashv$ | +        | +             | +-      | $\vdash$ | $\vdash \vdash$ | -          |          | 146      |                 | $\dashv$ | -        |          | -        |          | -+        | $\dashv$  |          |
|                        |          |          |                       | +            | +  | _            |          |           | _        | $\dashv$ |                | 97       | $\dashv$ | $\dashv$ | +        | +        | +             | +       |          | $\dashv$        | -          |          | 147      |                 |          |          |          |          | _        | $\dashv$  | -         | 4        |
|                        | 48       |          |                       | -            | +  | 4            | _        | 4         | -        | 4        |                | 98       | _        | _        | _        | +        | -             | 1       | -        | Щ               | ŀ          |          | 148      | _               | 4        | _        |          | _        | _        |           | $\dashv$  | _        |
|                        | 49       | _        | $\dashv$              | +            | +  | 4            | _        | -         | - -      | 4        | $\vdash$       | 99       | _        | 4        | _        | 4        | -             | +-      | Щ.       | Щ               | L          |          | 149      | _               | _        | _        | _        | _        | _        | $\dashv$  | _         | _        |
|                        | 50       |          |                       | Д,           | Ц.   |              | $\perp$  |           | L_       | ┙        |                | 100      | _        |          | L_       | ᆚ        | l             |         |          |                 | L          |          | 150      |                 |          |          |          |          |          |           | $\perp$   |          |